
A BILL FOR AN ACT

RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR
EXPLORATION SYSTEMS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that for the last fifty
2 years the State of Hawaii has partnered with the National
3 Aeronautics and Space Administration to develop and advance the
4 national space program, beginning with the astronaut training
5 program for the Apollo lunar missions and including a broad
6 range of discoveries in astronomy and planetary geosciences,
7 satellite communications, space-based environmental monitoring,
8 deep-space surveillance, and other activities, which have
9 established the United States as a global leader in space
10 exploration.

11 The legislature further finds that the State entered into
12 an agreement with the National Aeronautics and Space
13 Administration to expand the State's role as a contributor to,
14 and beneficiary of, the national space enterprise. The
15 agreement will enable the State to leverage strategic assets and
16 capabilities for space exploration, including the State's unique
17 geographical features, which resemble lunar and Martian terrain,



1 resident expertise in space science and technology, and
2 extensive research partnerships with other space programs
3 throughout the Asia-Pacific region.

4 The Pacific international space center for exploration
5 systems was statutorily established by the legislature in Act
6 169, Session Laws of Hawaii 2012, to provide unique
7 opportunities to expand and diversify technology-based
8 enterprises and education statewide and to advance the national
9 space program by leveraging Hawaii's substantial assets and
10 capabilities in space exploration.

11 One goal for the Pacific international space center for
12 exploration systems is to develop a world-class center of
13 excellence in Hawaii that can facilitate the design, testing,
14 and validation of new technologies to support robotic and human
15 missions to space. Another goal is to serve as an economic
16 driver for the island of Hawaii that will promote the
17 establishment and growth of new sustainable and green industries
18 along with associated jobs, workforce development, internships,
19 and science, technology, engineering, and math education
20 programs.

21 The legislature further finds that the Pacific
22 international space center for exploration systems has a unique



1 opportunity to facilitate and accelerate the development of
2 aerospace surface-system technologies by exploiting Earth-based
3 commercial applications in the State. The preliminary focus for
4 this program should be in the research of a sustainable concrete
5 supply, robotic operator training and certification, and the
6 attraction of companies to presently unpopulated business
7 sectors in Hawaii.

8 For the study and development of a sustainable concrete
9 supply, the legislature recognizes that current market demands
10 for concrete in Hawaii are primarily met through imported cement
11 and asphalt. Research and development that enables innovative
12 technologies for basalt concrete composition and delivery is an
13 attractive and self-sustaining alternative to continued cement
14 and bitumen imports. Currently, the Pacific international space
15 center for exploration systems is working with the International
16 Space Exploration Research Institute of Hanyang University in
17 South Korea; the National Aeronautics and Space Administration,
18 including the Kennedy Space Center, the Ames Research Center,
19 and the Johnson Space Center; the University of Notre Dame; the
20 University of Hawaii at Manoa; the University of Hawaii at Hilo;
21 the American Society of Civil Engineers; and local industries to
22 identify, verify, and validate sustainable and in-situ concrete



1 binders using the existing basalt resources in the State. This
2 is a critical step toward realizing Hawaii's potential in this
3 industry and provides an investment in the future of Hawaii and
4 its economy by offering a self-sufficient and in-situ source of
5 concrete for local applications.

6 The legislature further finds that with an increasing
7 technological availability of robotics for emergency response
8 and hazard mitigation, there is an emerging need for robotics
9 training and certification for civil and government robotic
10 operators. The Pacific international space center for
11 exploration systems is working with the Northern Center for
12 Advanced Technology in Canada to develop a robotic operator
13 training and certification program, and will be collaborating
14 with the University of Hawaii community colleges on course
15 facilitation and development. Additionally, the Pacific
16 international space center for exploration systems is exploring
17 opportunities with the Northern Center for Advanced Technology
18 in underwater robotics.

19 The legislature further finds that the recent emergence of
20 private commercial space access and a resurgence of global space
21 initiatives will involve significant private sector investment
22 in the development, testing, validation, and verification of



1 robotics, broadband, energy production, energy storage,
2 recycling, and renewable and sustainable technologies that can
3 have immediate application to improve the economy and the
4 general well-being of the State. The legislature also
5 recognizes the need to formulate partnerships with private
6 industry to facilitate state-based manufacturing and operations
7 in conjunction with the associated local workforce development.
8 The Pacific international space center for exploration systems
9 is exploring possible partnerships with Planetary Power, which
10 produces solar and hybrid energy generation and storage systems,
11 to establish a Pacific base of operations in Hawaii to
12 facilitate the manufacturing of specific components for fixed
13 and mobile solar concentrator units that will offer higher
14 efficiency than photovoltaic systems, as well as hybrid
15 biodiesel systems.

16 The Pacific international space center for exploration
17 systems is also working to establish a memorandum of
18 understanding with Hawaii Techworks and the east Hawaii
19 community development corporation to ensure that there is a
20 skilled local workforce in place to support these manufacturing
21 operations.



1 The legislature further finds that all of these initiatives
2 align with current demands in the State, as well as President
3 Obama's Advanced Manufacturing Partnership, and represent
4 critical components for a stronger economy in the State.

5 The purpose of this Act, therefore, is to appropriate funds
6 to provide funding for the Pacific international space center
7 for exploration systems to manage and facilitate its work in
8 bringing aerospace technology and corporations to Hawaii, to
9 expand and diversify Hawaii-based industry, and to provide the
10 training relevant to prepare Hawaii's workforce for employment
11 in technology-related fields, and to require the Pacific
12 international space center for exploration systems to report to
13 the legislature on its activities.

14 Moneys appropriated through this Act will be used to fund:

- 15 (1) Existing employee salaries and the creation of new
16 positions, including a marketing officer, a project
17 integration manager, an information-technology field
18 technician, and two student internships;
- 19 (2) Operational expenses, including the rental of staff
20 offices and warehouse space for Pacific international
21 space center for exploration systems hardware and
22 equipment; utilities; intrastate and interstate travel



1 to meetings and conferences; marketing costs
2 associated with website creation, graphic design, and
3 the development of brochures and trade advertising;
4 travel and lodging expenses for the Pacific
5 international space center for exploration systems
6 board of directors; and the Pacific international
7 space center for exploration systems conferencing
8 contracts; and

- 9 (3) The purchase of essential equipment, materials, and
10 services, including electronic test and design
11 equipment in support of robotics training and
12 education; mechanical equipment in support of robotics
13 training, the sustainable concrete project, advanced
14 manufacturing skills training, and ongoing testing of
15 robotic surface systems by the Pacific international
16 space center for exploration systems; command and
17 control equipment for new and existing robotics
18 hardware; situational awareness monitoring for robotic
19 operations training; software licensing; and a data
20 server for archiving project results, product designs,
21 and online training materials for a robotics operator
22 training course.



SECTION 2. Chapter 201, Hawaii Revised Statutes, is amended by adding a new section to part V, subpart B to be appropriately designated and to read as follows:

"§201- Pacific international space center for exploration systems; reporting requirement. The Pacific international space center for exploration systems shall submit, no later than September 1 of each year, an annual report to the legislature that includes:

- "(1) An updated business plan regarding the aerospace technology research and development park project;
- (2) Details on any progress made toward the development of a world-class space center in Hawaii;
- (3) The development of technologies and any concomitant effect on the level of resource imports into the State;
- (4) The status of all working relationships with educational and research institutions and federal agencies;
- (5) Details on any progress made toward the development of a robotic operator training and certification program;
- (6) The level of private sector investment in aerospace and related industries, including the number and



1 nature of any partnerships with private industry to
2 facilitate state-based manufacturing and operations
3 related to green energy technology;

4 (7) The status of the memorandum of understanding with
5 Hawaii Techworks and the east Hawaii community
6 development corporation regarding the cultivation of a
7 skilled local workforce to support planned
8 manufacturing operations; and

9 (8) A detailed statement of assets, liabilities, revenues,
10 and expenses for each fiscal year ending June 30."

11 SECTION 3. There is appropriated out of the general
12 revenues of the State of Hawaii the sum of \$400,000 or so much
13 thereof as may be necessary for fiscal year 2013-2014 for the
14 Pacific international space center for exploration systems for
15 personnel costs, operational expenses, and the purchase of
16 equipment, materials, and services.

17 The sum appropriated shall be expended by the department of
18 business, economic development, and tourism for the purposes of
19 this Act.

20 SECTION 4. New statutory material is underscored.

21 SECTION 5. This Act shall take effect on July 1, 2013.



Report Title:

Pacific International Space Center for Exploration Systems;
Appropriation

Description:

Appropriates \$400,000 for operations, personnel costs, and the purchase of equipment required to support the Pacific International Space Center for Exploration Systems' activities.
(CD1)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

